REMARKS

The present application includes claims 1-7, 10-12, 14-23, 28-34, 37-38, 40-46 and 51-53. Claims 1-7, 10-12, 14-23, 28-34, 37-38, 40-46 and 51-53 were rejected. By this Amendment, claims 10, 37 and 51 have been amended to expedite allowance of the pending claims.

Claims 1-7, 10-12, 14-23, 28-34, 37-38, 40-46 and 51-53 were rejected under 35 U.S.C. §102(e) as being anticipated by Killcommons et al. (U.S. Pat. No. 6,424,996).

The Applicant turns to the rejection of claims 1-7, 10-12, 14-23, 28-34, 37-38, 40-46 and 51-53 under 35 U.S.C. §102(e) as being anticipated by Killcommons. Killcommons relates to a medical network system and method for transfer of information. That is, Killcommons describes transferring medical data from a modality 12 to a server 20 for storage, and subsequently transferring the stored medical data from the server 20 to a user unit 50 via an email package for viewing.

Killcommons teaches the assembly and communication of multimedia information from a variety of modalities to remote users (abstract). Specifically, Killcommons describes a modality 12 -- a medical device, such as data acquisition equipment for magnetic resonance imaging (MRI), computed tomography (CT), ultrasound (US), nuclear medicine (NM), among others -- that sends data to a server 20 where it is processed and then stored and/or sent to others (col. 7, lines 44-51). The

server 20 includes a data interface 22 for receiving the data, a processing unit 24 for manipulating the data, a storage unit 30 for storing the data, an assembly unit 32 for gathering information, and an e-mail server 36 for sending the gathered information (col. 7, lines 56-61). Additionally, the server 20 includes a user interface 34 that combines with a browser enhancement module in a user's computer (col. 9, lines 22-29). Killcommons recites a combination of a server and a "browser enhancement module" for emailing medical images to a "user unit" (see, e.g., abstract).

The server 20 includes "a processing unit 24 for manipulating the data" (col. 7, lines 58-59). The processing performed by the processing unit 24 consists of compressing, encoding and/or encrypting the processed image data for transmission to the user unit 50 via email (col. 8, lines 9-19 and col. 10, lines 17-33).

The user unit 50 includes a browser 52 (col. 11, lines 18-28) and an enhancement module 54 (col. 11, lines 29-38). The enhancement module 54 includes a user interface 72 and manipulation elements 74 (col. 13, lines 7-16). The manipulation elements 74 "alter the display of information or data" (col. 13, lines 17-20). The enhancement module 54 also includes a modality control unit 78 for controlling "a plurality of modality operations, such as the settings during data acquisition" (col. 15, lines 17-29).

Killcommons discusses assembling multimedia medical image data into an email for electronic mail communication to a user's computer (Abstract). The data in the email is then extracted from the email to the user's computer by the user's computer and its browser enhancement module. The browser enhancement module is a "plug-in" or

ActiveX control to enable a web browser to accommodate the multimedia image data (Abstract). The plug-in or ActiveX control at the user machine instructs the server on how to compile the email (Abstract). Thus, the user machine does not control the server to process image data but rather simply instructs the server to compile the processed image data into an email for transmission to the user machine (col. 5, lines 6-22).

Killcommons employs a server to gather image data into an email that is sent via an electronic mail program to a user computer to be extracted and stored on the local user's machine (*see, e.g.*, col. 3, line 31 – col. 4, line 22 and col. 9, line 42 – col. 10, line 57). The Killcommons system "pushes" the email data to the user's local machine for viewing at the local machine. To that end, Killcommons assembles the image data into an email for local storage

As previously discussed, the present application relates to medical imaging data streaming. More particularly, the present invention describes transferring unprocessed ultrasound data from an on-site ultrasound imaging system to a remote terminal (Figure 1). Unprocessed ultrasound data includes digital, unprocessed ultrasound data converted from analog ultrasonic sound waves (paragraph 22). Conversely, processed ultrasound data includes ultrasound data after pre-processing and/or post-processing (paragraph 22-24). After pre-processing and post-processing, the processed ultrasound data is converted into pixel image data using a scan converter for viewing (paragraph 25).

More particularly, the present invention gives examples of pre-processing as "calculating the mathematical functions to transform the ultrasound data from one form to another for example" (paragraph 22) and post-processing functions as "B-compression, dynamic range adjustments, or intensity threshold, for example" (paragraph 24).

Additionally, the present invention provides that "any type of medical imaging system" may be employed (paragraph 38), and thus, is not limited to a particular modality, such as ultrasound, for example.

As described above, the server 20 and the user unit 50 of Killcommons are not capable of performing pre-processing functions or post-processing functions. Consequently, Killcommons is limited to <u>processed</u> medical data. That is, Killcommons only describes transferring <u>processed</u> medical data from a modality 12 to a server 20 for storage, and from the server 20 to a user unit 50 for viewing. In the section cited by the Examiner, col. 7, lines 44-51, Killcommons discusses making image data <u>DICOM compliant</u> via a dicomizer 14, *rather than processing unprocessed image data at a remote terminal.* Making the image data DICOM compliant simply indicates that the image data is transmitted in email messages formatted according to the DICOM standard. Thus, the DICOM format does not relate to image processing, and the dicomizer 14 does not process unprocessed data to form processed image data. Furthermore, the data is rendered DICOM compliant *prior to storage at the server 20*, rather than upon transmission to a remote terminal (col. 7, lines 44-51).

Killcommons does not teach or suggest pre-processing functions and post-processing functions. Consequently, Killcommons does not teach or suggest unprocessed medical data. Rather than transmitting *unprocessed medical imaging data* to a remote terminal for processing to form a medical image, Killcommons transmits an already processed (but perhaps not DICOM protocol formatted) *image* from a server to a user terminal via one or more email messages. Therefore, the Applicant respectfully submits that claims 1, 10, 16, 20, 28, 37, 43, and 51 are in condition for allowance.

Additionally, Killcommons does not teach or fairly suggest remote control of a medical imaging system for processing medical image data. Killcommons does not teach or suggest a medical imaging system receiving and executing commands from a remote terminal, including pre-processing and/or post-processing function commands. Rather, the only instructions the system of Killcommons receives from a remote terminal are instructions regarding how to package the already-processed image into one or more email messages for delivery to the remote user unit. Therefore, the Applicant respectfully submits that claims 7 and 34 are in condition for allowance.

Claims 2-6 depend from independent claim 1. Claims 11-12 and 14-15 depend from independent claim 10. Claims 17-19 depend from independent claim 16. Claims 21-23 depend from independent claim 20. Claims 29-33 depend from independent claim 28. Claims 38 and 40-42 depend from independent claim 37. Claims 44-46 depend from independent claim 43. Claims 52-53 depend from independent claims 51. Therefore, the

Applicant respectfully submits that dependent claims 2-6, 11-12, 14-15, 17-19, 21-23, 29-33, 38, 40-42, 44-46, and 52-53 are in condition for allowance.

Accordingly, the Applicant respectfully submits that claims 1-7, 10-12, 14-23, 28-34, 37-38, 40-46, and 51-53 are in condition for allowance.

Application No. 10/029,162
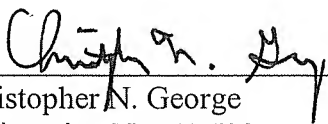Attorney Docket No. 15-DS-00544 (13048US01)

CONCLUSION

The Applicant respectfully submits that the application is in condition for allowance. If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited and encouraged to contact the Applicant at the number below.

The Commissioner is authorized to charge any necessary fees or credit any overpayment to the Deposit Account of GTC, Account No. 070845.

Respectfully submitted,

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